DOCUMENT RESUME

ED 198 698 FL 011 861

AUTHOR Erickson, Frederick
TITLE Timing and Context in Children's Everyday Discourse: Implications for the Study of Referential and Social Meaning.
INSTITUTION Southwest Educational Development Lab., Austin, Tex.
SPONS AGENCY National Inst. of Education (DHEW), Washington, D.C.
PUB DATE Feb 80
NOTE 45p.: In its Working Papers in Sociolinguistics, Number 67, p1-43, Feb 1980.

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Child Language: *Connected Discourse: Discourse Analysis: Interpersonal Competence: Language Acquisition: Language Research: Semantics: *Sociolinguistics: Speech Communication: Young Children

ABSTRACT

An oral screening test administered by an adult to a five-year-old child was transcribed and analyzed. The test was chosen as an example of a referential communication task that is also a social communication task. The analysis demonstrates that a participant in communication assumes that the other participants are employing strategies for inferring social meaning, and that a failure of two participants' inferences to match results in a "stumbling" and a misunderstanding even on the literal, referential level. In the case of the screening test, one result of misunderstandings is that the child's overall score is different from what it would have been had she been more skilled in interpreting the social meaning of talk. A key aspect of processes of conversational inference and interpersonal coordination is shown to be the timing of interaction. Behavioral means by which communication is socially and rhythmically organized are discussed, with reference to the development of these means as an aspect of child language acquisition. (JB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED198698

Timing and Context in Children's Everyday Discourse: Implications for the Study of Referential and Social Meaning

by
Frederick Erickson
Michigan State University

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
F. Erickson
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Working Papers in Sociolinguistics
NUMBER 67
February, 1980
Southwest Educational Development Laboratory
211 East Seventh Street
Austin, Texas

JC 810 74

2

TIMING AND CONTEXT IN CHILDREN'S EVERYDAY DISCOURSE: IMPLICATIONS FOR THE STUDY OF REFERENTIAL AND SOCIAL MEANING*

Frederick Erickson
Michigan State University

In interdisciplinary conferences there is often a problem of communication across research specialties which makes the successive reading of differing kinds of papers not so much a "dialogue" among differing research specialties as it is an exercise in parallel play (cf. Shulman, 1978). During the conference one could see manifested distinctions made by Dickson in his orienting paper between referential approaches and sociolinguistic approaches to the study of children's oral communicative capacity and its development. The difference between approaches which was most striking to me involved underlying assumptions of semantic theory; differences in the relative weight given in the two streams of research to literal, referential meaning of speech, and to more metaphoric social meaning of speech. As Olson and Hildyard (1978) points out, the distinction between these two aspects of meaning is an essential one for sociolinguistics (see also Hymes, 1974, Austin, 1964, & Gumperz, 1977); indeed it can be said that it is this distinction which defines the phenomena of interest to sociolinguistics. As a sociolinguist I assume as a first principle of research that while it is possible to draw an analytic distinction between referential and social aspects of meaning in talk, in the state of nature these two aspects of meaning are never found in separation; in naturally occurring conversation they are always inextricably linked. During the conference it seemed that my assumption was not shared by referential communication researchers. They

*This paper was originally delivered at the Conference on Children's Oral Communication Skills, Wisconsin Research and Development Center for Individualized Schooling, University of Wisconsin at Madison, October, 1978.

seemed to make a distinction between referential and social aspects of meaning, but then in the conduct of research, they took that distinction to a different place than a sociolinguist would.

If one pushes the assertion that in nature the social and the referential aspects of meaning in talk are inextricably and non-randomly linked, then it follows that the construction of experimental task situations to study referential communication in isolation from the social is an exercise in utter futility. One can argue this for two reasons. First, because of the inevitable "leakage" of social meaning into the interpretation by the subject of the verbal and nonverbal interaction between himself and the experimenter (or machine stimulus source), the degree of "control" required for experimental manipulation of variables is not present. Second, because the experimental task situation is an attempt to arrange conditions so that the referential aspects of communication can be studied in relative isolation from the social aspects, the social situation of the experiment is so unlike anything in nature that it is itself a source of profound alienation and confusion to subjects. Hence the data derived suffer not only from intrinsic invalidity but from extrinsic invalidity; they are "ecologically invalid."

That's the critique in classic form. It has been made by psychologists, as well as by linguists, anthropologists, and sociologists. The work of Rosenthal supports the former argument of the intrinsic invalidity of experimental data, especially in his most recent research on the leakage of social meaning into experimental situation through the nonverbal channel of communication (Rosenthal, et al., 1979). Bronfenbrenner makes explicitly the latter argument of ecological invalidity (Bronfenbrenner, 1975). Cole's critique of experimental research in cognitive psychology combines the two arguments (Cole, Hood, & McDermott, 1978). Yet to stop there would be simplistic.

There may be middle positions that are more reasonable than those at the extremes. During the conference I realized that, while the stream of referential communication research may have been failing to deal adequately with the role of social meaning in speech, the stream of sociolinguistic research may have been focusing too narrowly on social meaning at the expense of the referential. This is understandable, given the origin of the interdisciplinary sociolinguistics "movement" as a reaction to what was considered the artificial abstraction and "de-sociation" of the notions of speaking and semantics in linguistics and in analytic philosophy. Still it seems that sociolinguists could profit from considering referential aspects of meaning more fully as they study children's speech. Especially if the purpose of our research is to relate to the field of education, and more specifically, to achieve better understanding of the processes of classroom instruction, then the ways in which speech communicates the information and the logical relations which constitute part of the content of "subject matter instruction" ought to be of greater interest to sociolinguists than they have been. Even as we continue to argue that social meaning is an essential part of the whole meaning package in the language of "academic" instruction in school (and in the language of referential communication tasks in the laboratory), sociolinguists need to account more adequately for the referential contents of talk as well, if we are to construct a more fully comprehensive theory--just as referential communication researchers need to account more adequately for social meaning in talk. Some synthesis of the two approaches may be desirable.

The Substance of This Paper

It should be noted that cognitive psychologists are not the only ones to have attempted the research strategy of separating out social from referential meaning. Chomskyan linguistics does this too, as does British analytic philosophy and French structuralist analysis

in the anthropology of Levi-Strauss and his followers. But the sociolinguistic critique of Chomsky by Hymes (1974), the critique of analytic philosophy by Wittgenstein together with the growing conception within linguistically oriented philosophy of speech as social action (cf. Searle, 1969), and the current attacks on French structuralism by such critics as Bourdieu (1977) ought to be attended to by students of referential communication. In each case the critique centers on the issue of the attempt to separate the study of social from referential meaning and on the attempted analytic abstraction of language from the scene of its use in social life, from its context of practical action. Each of the three lines of criticism argues, using differing "surface structural" terms, that humans don't just do talk for its own sake. Rather, they talk together in order to accomplish social purposes, making use of the human capacity to transmit social and referential meaning simultaneously, implicitly and explicitly, verbally and nonverbally, and to read off these meanings inferentially "against" (or better "within") the context of the action itself. Speculation about what can be learned about these processes of multifunctional encoding and decoding, through detailed observational analysis of audiovisual records of children's naturally occurring communication, is the topic of this paper.

Crucial to such work is a theoretical conception of the semantics of the relationship between message form and message context. We know a good deal about how to analyze aspects of form in verbal messages, but we know much less about social contexts and their dimensions; our theoretical understanding of contexts is singularly undifferentiated. One dimension of the context of an utterance, as Olson and Hildyard (1978) so clearly argues is the social relationship between speaker and hearer. The aspect of social relationship they consider is relative status; the relation of subordination-superordination or of equality of status between speaker and hearer. With differing status positions go differing attendant communicative rights and obligations between speakers and hearers, such as obligations of politeness and right in giving orders. Directives will be performed by speakers

in different "appropriate" forms depending on the rank relationship between speaker and hearer.

For a sociolinguist the social appropriateness of a given message form is of central interest. Apparently for the referential communication researcher, ambiguity of reference is of central interest (see for example Markman, 1978, and Robinson, 1978). For speakers and hearers, making judgments of social appropriateness and ambiguity of reference would seem to involve quite different inferential processes. A judgement as to referential ambiguity would seem to involve primarily the processing of lexical and syntactic information; focus on the message form itself. A judgement as to social appropriateness, however, may be a more complex process involving not only the decoding of the message form, but in addition a "reading off" of the message form against the backdrop of the social context of its occurrence. Thus the sign/social context relation (what Burke, 1969, pp. 3-7, has called the "act-scene ratio") is a source of semantic content in addition to the form of the sign itself. One aspect of the interpretative competence of a hearer, then, may be the ability to distinguish between "fit" and "lack of fit" in the message form/content relation, an ingredient in the process of decoding social meaning which may be analogous to the "comparison task" ability discussed by Asher (1976, Asher & Wigfield, 1978).

Interestingly, lack of usual "fit" between message form and social context does not necessarily result in an interpretive judgement of ambiguity of social meaning. A metaphoric transformation may result. People can play upon one another's interpretive capacity to "read" message form/context incongruity as an implicit signal for irony or other kinds of metaphoric fooling around, as in an exaggeratedly polite request from a surgeon to a nurse during the course of an operation, "If I asked you very nicely, would you give me a scalpel?" (Goffman, 1961). The very exaggeration of politeness by the physician points ironically to the physician's absolutely superordinate position vis a vis the nurse; a position from which the

physician has the actual communicative right to issue unmasked commands: "Scalpel! Hemostat!" Neither way of asking for the scalpel is "read" as ambiguous; it is just that the first form is interpreted as signalling an ironic "key", while the second form signals lack of irony.

This playing upon apparent message form/context incongruity may be an adult ability that young children possess only incompletely. Indeed, as Olson and Hildyard note (in press) for young children the process of reading the social context is more salient than that of reading the syntactic form of the message. A crucial problem of decoding for children, then, may not so much be that of ambiguity of message form, but of ambiguity in the message-context relation; a kind of "situational ambiguity" (or message/context incongruity) in contrast to the "message ambiguity" which has been of interest to referential communication researchers.

In everyday interaction, young children may have found it adaptive to scan the social context more acutely than the message form. It is possible then, as Olson and Hildyard (1978) and Cole et al. (1971, 1978) that the apparent inability of young children and other cultural neophytes to attend to fine tuning in the experimental manipulation of variation in message form is not due to children's egocentricity, as Flavell argues, following Paiget (see Flavell, Botkin, Fry, Wright, & Jarvis, 1968), but is due rather to children's sociocentricity--to the greater salience of message context over message form for them at that age. What may be being acquired at around age seven is greater awareness that the school "game" and the laboratory referential communication task "game", involves attending primarily to the form of the message considered apart from its context.

Asking people to attend only to the text of a message runs quite contrary, sociolinguists would argue, to the experience of children and adults with speech in everyday life. In naturally occurring conversation, utterances are not just texts, but are texts shaped by what ethnomethodologists doing conversational analysis call the principle of recipient design, i.e. the usual tendency of speakers in forming their utterances to take account of the social context--the social

identity of their hearers and the practical activity that is occurring at the moment--and to choose among optional ways of saying the same thing referentially (Gimme that vs. please) which signal the social relationship the speaker intends (cf. Gumperz, 1977). For the speaker then, a recurring question is "Who (in terms of social identity) is the recipient of my communication and what is it (activity) that's happening now?" For the hearer a recurring question is "Who is the speaker and what is his/her way of speaking and telling me now about who I am and what's happening?" Interpretive confusion can result when the speaker's speech doesn't fit the hearer's reading of the social situation. It is reasonable to speculate that many referential communication experiments present children with puzzling relations between an "odd" social situation and "odd" ways of speaking in that situation, and that these puzzlements produce interpretive confusion, which affects the children's task performance.

The problem is further compounded in that in naturally occurring conversation the answer to the question, "Who is the recipient?" is not fixed, but continually changes in subtle ways from moment to moment during the course of the conversation. This is due to two factors: First, a person in everyday life occupies not just one status, but many simultaneously (i.e. that person's social identity is a composite package of many statuses, many attributes of social identity), and second, at different times in a conversation, different attributes of the social identity package may be being signalled as interactionally relevant (Goffman, 1961, pp. 105-106). For example, in interaction with a child a teacher or parent may signal differential superordination vis a vis the child from one moment to the next. The archaic sense of the term "condescension" refers to the sliding-scale nature of the superodination-subordination relationship. Goldsmith's heroine "stooped to conquer" in differing amounts and in differing ways during the course of the play. The ethnomethodologist Cicourel (1972), points out that status and role between speaker and listener (and the

attendant distribution of communicative rights and obligations between them) is not fixed but is continually being renegotiated during the ongoing course of interaction in everyday life.

Moreover, as listeners and speakers are apparently "reading" cues as to who-is-it-the-other-persons-are-signalling-themselves-to-be-now, and what-is-the-activity-that-is-happening-now, the cues are being presented simultaneously to one another by speakers and by listeners. It is not as if while a speaker talked it was only cues in the speaker's speech and nonverbal behavior that were available in the scene to be "read." While the speaker or speakers are doing speaking, the listener or listeners are doing listening. Listeners' ways of doing listening apparently provide speakers with information about how the spoken message is getting across, and that information is apparently used by speakers in shaping the recipient design features of their speech as they are talking. In explanations, for example, the speaker may continue on from one explanation point to the next, or recycle an explanation point in successive phrases in which the level of abstraction of explanation is continually lowered at each repetition of the point being explained (cf. Erickson, 1979 and Erickson and Shultz, in press). What is necessary is a theory of oral communication which is informed by notions of the social organization of face-to-face interaction.

When people are "co-present" to one another in face-to-face interaction (cf. Kendon, 1975), what looks on the surface to be a series of discrete, successive "turns" is actually a process of continuous, sumultaneously reflexive behaving and monitoring by the two players. Through such reflexivity, the conversation can be said to be jointly produced by its participants (cf. Mehan and Wood, 1975, pp. 20-23). From this theoretical perspective an essential aspect of conversationalists' oral communication skills is a capacity for interactional inference, which would include a capacity to anticipate (predict) the likely state of affairs in next moments, together with an ability to "read" the current state of affairs in the present moment. Such inferential capacity may be part of what Flavell (1978) means

by "metacognition," as the cognizing subject is engaged in face-to-face interaction.

Some Functions of Timing in the Social Organization of Conversation

All this points up the importance of the when of copresence; of the role of time and timing in the social organization of interpersonal coordination to face-to-face conversation. It is the significance of when that I want to stress here. In conversation, as McDermott (1976) puts it, "people are environments for each other". They are constantly, actively engaged in telling each other what is happening, by verbal and nonverbal means. To change the language slightly, they are part of one another's task environment, whether in an experimental or a naturally occurring situation of oral communication. The task environment for conversationalists can be seen to be a sociocognitive task environment, with the simultaneous organization of speaking and listening behavior constituting, continually, part of the "array" for the conversational partners. If the partnership is so interdependent as conversationalists jointly produce social and referential meaning in their conversation, then they must have some means of coordinating their interactional behavior and interactional inference. That means appear to be timing.

Little more than ten years ago Condon documented the fact that the speaking and listening behavior of conversational partners occurs in synchrony (Condon and Ogston, 1967). This finding has been found to generalize across a wide range of human cultural groups (Byers, 1972) and age levels. The pediatrician Brazleton, and subsequent researchers, have found interactional synchrony in the behavior of newborn infants and their caretakers (Brazleton, Korlowski, & Main, 1974). Some researchers have in addition investigated the rhythmic patterning of this synchronous organization of verbal and nonverbal behavior, including Byers and Byers (1972), Byers (1972), Chapple (1970), and Erickson (1976). We find an underlying, metronomic

periodicity in the organization of verbal and nonverbal behavior in speaking and listening. It seems that the recurrence of a regular rhythmic interval in interactional behavior enables conversationalists to coordinate their behavior by what Chapple terms entrainment, and that the engagement in entrainment by conversational partners enables them to judge the occurrence in real time of the "next moments" they need to be able to anticipate in order to do the kind of interactional inference. This real time (in the sense of clock time) aspect of the organization of behavior in conversation seems to be crucial for its social organization.

There is yet another aspect of time and timing which needs to be considered in a theory of the social organization of conversation. This is a less precise kind of timing; "lived time" as distinct from mechanically measurable time. European phenomenologists deal with this notion of lived time in their introspective accounts of "lived experience" (Merleau-Ponty, 1965). A recent book by Sudnow (1978) considers the lived aspects of time and timing in an introspective study of the process of learning to play jazz piano in ways that were judged appropriate by other jazz musicians. In so doing, Sudnow learned how to anticipate the appropriate occurrence of chord change and then to perform successive chord changes in a way which went beyond the temporal literalness of the metronome.

Introspective accounts, of course, have been ruled out of bounds by scientific psychology. Yet there has been within psychology a tradition of observational study--Piaget, for example--in which entities just as elusive as the notion of non-mechanically measurable aspects of timing have been studied to bring greater conceptual clarity in theory construction. So even though lived time cannot be operationally defined it may be useful to look for in observational studies. The potential importance of the distinction between mechanically measurable and other kinds of time is underscored by philology; this is precisely the distinction made by the use of two different words for time in the Greek translation of the Hebrew Bible, the Septuagint and in the Greek

New Testament. One term, chronos, referred to what we now think of as mechanically measurable duration. The other term, kairos, is the time and timing of divine action in human history: "the time (kairos) is at hand." As the Hebrew prophets predicted the Day of the Lord they spoke of it as occurring in the domain of kairos rather than chronos. The Psalmist in Psalm 103(104): 27 uses kairos for the "right time", translated "in due season" in the Revised Standard Version (see also a similar usage in Matthew 24:45, translated "the proper time"). The distinction between chronos and kairos is analogous to that the anthropologist Hall makes between technical time (measurable) and formal time (Hall, 1959, pp. 63-92).

It is in the sense of kairos as well as of chronos, that I want to consider the when of social context, and of change in social context from moment to moment in a particular conversation. As the context changes, so does the participation structure (Philips, 1972, Erickson and Shultz, 1977); the overall pattern of allocation of communicative rights and obligations among the partners.

In summary, I have been making two points: First, naturally occurring talk communicates social as well as referential meaning. Conversationalists are constantly relying on one another's capacity to encode and decode social meaning; this is an essential feature of the moment-to-moment steering of one another through a conversation, such that interpersonal discourse has a social organization, as well as a logical organization. Second, conversationalists not only have ways of indicating and interpreting their social intentions from moment to moment; they also have ways of pointing to the broader (temporally longer term) contexts of interpretation against which their indications of momentary intentions are to be "read off". They have ways of telling one another verbally and nonverbally, usually implicitly, what the overall activity context is and how it is changing; when a new sequence of connected action is about to begin, how their social relationship is changing as the course of the action changes.

The following example illustrating these points comes from a naturally occurring event which is similar to an experimental referential communication task: A screening test given by an adult to a five year old child. The test is administered in the kindergarten classroom at the beginning of the year by the special education teacher to determine whether children entering kindergarten have any handicaps for which special services are needed. The test is a referential communication task in that the tester is required to attend to the literal meaning of the tested child's answers. But the test is also a social communication task in that in order to know how to answer correctly, the child must understand the social as well as referential meaning of much of the tester's speech (cf. Mehan, 1978).

On the third day of school the test was being given to Angie, a five year old entering kindergarten, who had very little prior school experience, and who had no experience with tests of this sort. The social situation of the test was unusual in that a second child Rita, was also present, seated around the corner of the table from the tester and Angie. The presence of this extra member complicates the social situation, as does Angie's apparent lack of knowledge of the nature of the test as a social occasion. Because of the interactional confusion which results during the course of the test's administration in face-to-face interaction the test results are invalid as assessment data. Fortunately, in this case, the criterion level of performance was so low that Angie "passed" it.

One can infer from the false starts, seemingly irrelevant remarks, and other interactional breakdowns which appear in the transcript that the tester and the children are having troubles with contextural definition and interpersonal coordination during the enactment of the test. Many of their troubles seem to involve frame definition and maintenance (Goffman, 1974). There is trouble around membership boundaries and around distinctions among member roles--who is "in" the event and who is "outside" it, what the communicative rights and obligations of the

various "insiders" are. There is even more fundamental trouble around temporal boundaries--defining the beginning, continuation, and ending of the event; when the opening is being opened, when the closing is being closed.

These are not simple matters. They are never definitively resolved by the tester and the two children. That is not, I think, just because this example is an odd instance of a test, although it is indeed an odd instance. One expects that definition of situation, role, and status is never fully resolved during the course of an event. Since the particular circumstances of any actual event are in some respects unique, it is adaptive for the normative cultural guidelines for appropriate action to be quite general and thus inherently incomplete (cf. Garfinkel, 1970), and for the interacting individuals to possess the interpretive capacity to play the encounter by ear, organizing their action as a specific adaptive variation on a more general sociocultural theme for the type of event in which they are engaged. One expects, therefore, that people will be working from moment to moment at definitions of role and situation, relying on some socioculturally shared expectations of how what is happening should happen, yet never able to rely fully on those general expectations.

In the example of the screening test the interactional partners do not seem to share enough mutual understandings of the nature of the test as a social occasion, nor of one another's ways of communicating social as well as referential meaning, in order to interact in reciprocal and complementary ways. In the absence of some of the social steering capacity the participants need in order to coordinate their social action as improvisation, their performance keeps falling apart.

Transcription Notation System

Before presenting the transcript a note about the transcription conventions is necessary. Sentence terminal pauses (usually indicated in print by the period) are indicated in the transcript by a double slash (//), while shorter clause-terminal pauses are indicated by a

single slash (/), which is the equivalent of the comma. As will be shown later, the duration of these pauses is usually uniform across instances of them; this stability of duration is part of the underlying rhythmic organization of the discourse.

Speaking turns are indicated by letters in parentheses. Usually in the transcribed conversation at least one sentence-terminal pause separates a prior turn from a succeeding one. Occasionally, however, turns at speaking are exchanged without being separated by a pause. If the successive speaker begins to speak exactly at the point in time in which the previous speaker has stopped, this is indicated by a vertical bar with horizontal "flags" on it going in opposite directions.

(g) A: Wanna play house?⌉
(h) T: T:⌊Not yet/

If the successive speaker begins to speak before the previous speaker has stopped speaking, so as to overlap the previous speaker's speech, this is indicated by a vertical bar with horizontal flags going in the same direction:

(gg) T" You can⌈drink milk
R: ⌊and JUICE

Elongation of a syllable is indicated by a succession of double dots (O::]]).

These notation conventions are an adaptation of those of Sacks, Schegloff,and Jefferson (1974) and of the adaptation by Gumperz and his associates (cf. Gumperz, 1979) of the stress, pitch, and pause notation of Trim (1975). Stress (a sudden increase in loudness, independent from a shift in pitch) is indicated in the transcript which follows by capitalization of the letters of the stressed syllable or word (T; BEAUtiful). In the second transcript presented in the paper, stress is indicated in a slightly more complicated way, through use of a vertical mark preceding the stressed syllable. If the pitch of the stressed syllable is high the stress mark appears above the line

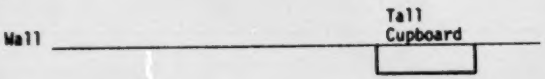
of text (T: 'Good). If the stressed syllable is low in pitch the stress mark appears below the line (T: ,good). These marks account for stress in the absence of a pitch shift. When stress is combined with a pitch shift diagonal marks are used. If the left side of the diagonal is high (\) that indicates a shift from higher to lower pitch during the syllable, and if the left side of the diagonal is low (/) that indicates a shift from lower to higher pitch. Placing the diagonal mark above the line of text indicates that the shift (in either direction) starts at a high point, while placing the diagonal mark below the line of text indicates that the shift begins at a low point. Thus there are four possible shifts:

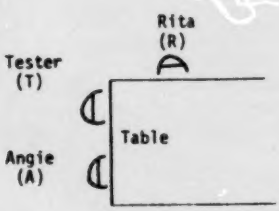
(1) high falling: \good

(2) high rising: /good

(3) low falling: \good

(4) low rising: good/





(Scene: Screening test in a kindergarten-first grade classroom. The purpose of the test is to identify entering kindergartners who need special educational or medical help. It is the third day of school, and the "testee", Angie, has had very little prior school experience and no experience with tests of this sort. Also present are Rita, who has just taken the test, and the tester, who sits between Angie and Rita.)

(1) T: Angie? // or Teresa.

(2) A: Angie.

(3) T: Little Angie / OK dear. // // (pause as tester writes notes on the child who has just been tested)

(4) A: Angie and Brienza

(5) T: I'm writing down little things that Rita said to me / and I'm gonna write down things that YOU say to me // (looking at A)

(6) R: When are you _____? // (Rita addresses Angie)

(7) A: Wanna play house? (looking at R)

(8) T: T: Not yet / not yet / (rapidly)

(9) R: After // after / ah / after ___ gonna go play with the / um things.

(10) A: What things?

(11) T: Angie? // (the Tester, who up to now has been writing notes on what Rita

said during the previous test, now turns to face Angie and speaks more loudly)

(12) A: Wha things? (looking at R)

(13) T: Maybe you can play it after THIS. // // OK, take this pencil, Angie // tell me what THAT is // (the Tester looks at Rita and speaks with slightly higher volume and with widened intonation contour) (the Tester hands A a pencil)

(14) A: A circle

* * * * test questions continue * * * *

(15) T: OK, Angie/ OK // NOW / (the Tester turns page--Angie has just finished writing letters of her name)

(16) R: Can we go and play now?

(17) T: Not yet// After this you and she can go and play house // maybe you'd like to play with a doll over there. (the Tester looks at Rita) (more volume, wider intonation contour, points across room)

(18) R: (remains seated)

* * * * test questions continue * * * *

(19) T: OK? Listen carefully now // In the daytime it is LIGHT/ what is it at nighttime/ // / (the Tester turns to face Angie)

(20) R: DARK (loudly, one half pause-unit "too soon")

T: O::H: (shakes head at Rita)

A: Dark (softly)

You can't sit here if you
TELL her.// //
What is nighttime? (turns head to face Angie)

(21) A: // // [dark (Angie says this very softly)
(22) T: [If `daytime is ,light/ 'night-time is // (rhythmic sing-song)
(23) A: light //
(24) T: nighttime is ,what //
(25) A: ,light
(26) T: (marks down Angie's answer as wrong) What do you do at nighttime / go to bed? // (a pause of two sentence-terminal pause units in duration)
(27) A: (nods)
(28) T: What do you do when you're thirsty? // (Angie shrugs)
(29) A: // get a glass of water (in a "that's obvious" intonation)
(30) T: (writes this answer on paper) (pause as the Tester writes)
(31) R: Yeah if you're thirsty/ huh // or you can drink milk
(32) T: You can drink water// (writing on paper and looking down at it)
You can [drink milk
R: [and JUICE! // (loudly)
(34) T: You can drink juice //
(35) A: Can I get me some water now?
(36) T: [Not now // (rapidly)
What do you need stoves for, Angie? (looks at Angie)

(37) A: // \Cook. (shrugs, and says "Cook" in a "that's obvious" intonation)

(38) T: / To `cook/ of course // (full terminal pause--appropriate for turn exchange in the next moment)

(39) A: / What's that door? (pointing to tall cupboard)

(40) T: Closet // The 'closet door //

(41) A: What's inside it?

(42) T: Well, maybe you can 'look after you 'finish here // (exaggerated intonation and stress)

`OK/ I'm going to say a sentence and you repeat after me.

* * * * test questions continue * * * *

(43) T: Can you skip, Angie? // Go over there to that house / and skip back to me. (points across room to area in which children are building a house of blocks)

(44) A: (skips about 5 steps over to the house and comes part-way back)

(45) T: `BEAUtiful

A: I want to go over here (points to boys listening to record player with headphones on, and speaks somewhat more loudly)

(46) T: You'd have to ask the boys / I don't know if they'll let you / (the test is not finished)

(47)	A:	CAN I GO IN THERE (starts off to the house area and does not return)	(turns back on the Tester and shouts across the room to the girls who are building the house of blocks)
(48)	T:	(pauses without moving, then shrugs shoulders and turns back to the paper, bending down as she begins to write on it)	(the test has ended)

Discussion of the Text

Beginnings of events, and their endings, must be interpersonally negotiated and interactionally cued (cf. Cook-Gumperz and Corsaro, 1976, on the negotiation of entry and the beginnings of events in young children's play). The test event begins to begin as the tester established that the little girl who has come over to the testing is Angie and not Teresa (turns 1-2), which is the first membership issue. Angie's membership in the test as an "insider" is manifested by the tester's question (1), repetition of Angie's answer to the question (3) and comment addressed to her (4). The summons issued by a question can be seen as de facto granting of communicative rights (and obligations) to the addressee by the addressor of the question.

The second membership issue begins to arise as Rita addresses a question (6) to Angie. The literal content of that question is unintelligible, but the social significance of it as a summons for a response seems to be clear to Angie, because she responds to it (with a question--turn (7)--which functions as an acceptance of Rita's apparent invitation). The content of Angie's question, "Wanna play house?" is inappropriate because it is an invitation to Rita to leave the event test, whose opening for official test business the tester is about to open up. We will return later in the discussion to some issues of the temporal boundaries of the event. For now the salient point is that Angie's response to Rita (turn 7) acknowledges her right as a member inside the frame of the event to have his question responded to in some way. Rita has been granted by Angie the right to take a turn at speaking in the event which is beginning.

The tester, however, does not immediately grant Rita that communicative right. The way the tester does this leaves ambiguous Rita's status. Is she an outsider? This is an ambiguity of social meaning rather than of referential meaning. The literal meaning, the lexicon and syntax, are clear. It is the distribution of membership rights and duties which is not clear. At first the tester does not address Rita

at all. She responds to Angie's invitation to Rita to play house by saying to Angie rapidly, "Not yet/not yet" (turn 8). That seems to function as an implicit cue to Angie that the tester will soon begin the instrumental business of the event. Simultaneously, it seems also to function as an indirect cue to Rita that she is not "in" this conversation. Rita, undaunted, responds not to the tester's cues that the test is about to start, but to Angie's invitation to play house. Rita does this by saying, "after... gonna go play with the/ um things" (turn 9). Referentially, this is ambiguous enough that Angie asks Rita to clarify what "things" she is talking about. I infer from that and from the referential content of the tester's comment, "Maybe you can play it after ˋTHIS." (turn 13), that Rita and the tester assume that Rita means "Play with the things for playing house", since the house-playing props are located right past where Rita is sitting where the children usually play house.

Even as Angie's question, "What things?" can be interpreted referentially as an attempt to tell Rita she doesn't understand what she just said, it can also be interpreted socially as reiterating her acknowledgement of one of Rita's fundamental rights as an insider; she can expect response from Angie to her questions. The tester, by next addressing Angie rather than Rita (11), may be implicitly denying Rita's right to get a turn in the conversation. This seems even more clear in turn (13), after Angie has again acknowledged Rita's response rights by repeating her question to Rita (rather than responding to the tester's opening cue, "Angie?"). At this point the tester says to Rita (rather than to Angie) in an intonationally pointed way, "Maybe you can play it after ˋTHIS (two second pause, in which Rita does nothing, including not getting up and leaving, which she might have done). OK, take this pencil, Angie."

Referentially the tester's comment opens up the possibility of playing house sometime in the future. It also seems to communicate two social messages which are apparently contradictory. The first

implicit message of turn (13) could be glossed, "Wait until I've finished giving Angie the test," or perhaps, "Butt out, kid, NOW." The intent seems to be a nudge out of the event. Yet the indirectness of the directive is confounded by another implicit message. By addressing Rita at all (except to say explicitly, "Out, NOW") the tester has left ambiguous whether she is acknowledging Rita's membership rights to any turns at speaking or not.

That this ambiguity in the cuing of social meaning may have been a strategic mistake for the tester is suggested a few turns later, when Rita interjects another question to Angie, "Can we go and play now?" (Turn 16). This time the tester responds somewhat more directly (turn 17) but still doesn't say explicitly "Out, NOW". In turn (18), after the tester has said in an even more intonationally pointed way to Rita, "Maybe you'd like to play with a doll over there," Rita still remains sitting at the table. From Rita's response to turn (13) in which the two second pause after "Maybe you can play it after THIS," we can infer that she may not understand the intended directive force of such masked imperatives. The pause seems to be a cue that Rita had better shut up now, but the imperative force of the pause cue seems to have been lost on Rita. The tester may be using these indirect command forms because she is being videotaped. But the ubiquity of such masked imperatives in the talk of teachers during lessons is well established in the literature (cf. Gumperz and Herasimchuk, 1972, Sinclair and Coulthard, 1975, Mehan, 1979, Shuy and Griffin, et al. 1978). Whatever her reasons for using indirect means of control, a consequence is that Rita fails to comply with the directive intentions. The tester communicates in increasingly more unmasked ways across turns (13) and (17), but Rita seems unable (or unwilling) to interpret the tester's directive cues in the ways the tester seems to be intending.

A few turns later Rita raises the ante and so does the tester. In turn (20) Rita enters the conversation between the tester and Angie, not as she had done before--by addressing a question to Angie--but by saying the answer to the question the tester has just addressed to

Angie. The tester responds to Rita's inappropriate taking of a turn by being very explicit (turn 20):

O::H// You can't sit here if you TELL her
(shakes head)

From this point on Rita does not talk during the test, either to provide answers to the questions addressed to Angie, or to address questions to her, with but one exception (turns 31 and 33) which will be discussed later.

Turns (19) through (26) are of interest not only because they show problems of membership and role definition--with the ground rule finally established, almost in so many words, "You can sit here, Rita, but you can't answer Angie's questions." (This is Angie's test.) In addition, this set of turns shows one aspect of the importance of timing in the social organization of conversation. In this instance the reciprocal timing of successive answer slots and question slots becomes arhythmic momentarily and this interferes with the mutual production by the tester and Angie of an answer by Angie which will be regarded by the tester as referentially "right." Angie does provide the referentially "right" answer; she does so twice (turns 20 and 21) but says the right answer in the wrong time. This social interactional mistake in timing results in the tester's apparently not "hearing" Angie's right answers as Angie produces them. The final result of the interchange is that the tester writes down Angie's referentially wrong answer as the official answer to the question. Here the social "rightness" of the temporal placement of the answer relative to the timing of the end of the tester's question seems to be what is salient for the tester. The tester seems to "hear" the answer given in the right time, even though the answer is informationally "wrong."

To understand how this may be happening it is necessary to consider the role that timing seems to be playing as an organizing device for interpersonal coordination in conversation. It is also necessary to consider briefly the communicative means by which people seem to be

giving one another cues about the temporal organization of their behavior together as they engage in face-to-face interaction. In English, which is a heavily stressed language, one of the means by which timing cues are given, is by patterns of vocal emphasis. Emphasis is achieved by stress (increased loudness) and pitch (rising or falling intonation shifts). Stress may occur without pitch shifts. Usually pitch shifts are accompanied by some stress. By these means certain syllables are more promient than others in the speech stream. Syllables which receive both stress and pitch shift are termed tonal nuclei by some linguists.

Two things about emphasized syllables are especially relevant to this discussion. First, in English, tonal nuclei and other kinds of emphasized syllables often occur at those points in the speech stream at which the speaker is introducing new informational content (cf. Gumperz, 1978). Second, emphasized syllables tend to appear in the speech stream at evenly spaced intervals across time. Thus in English, tonal nuclei and other prominent syllables mark an underlying, regular cadence in speech rhythm. This rhythmic "beat" is also maintained in patterns of emphasis in nonverbal behavior--the "peaks" of motion in gestures and head nods, the points in time at which people change postural positions while talking. The underlying cadence is also maintained by points of onset in speech after a period of silence, or at the exchange of turns between speakers. This is not to say that every stressed tonal nucleus, or every gestural sweep of the hand, or every other sort of verbal and nonverbal emphasis occurs at a regularly spaced rhythmic interval when people are conversing. Rather, it is that these points of emphasis occur more often than not at a regular interval. That is enough redundancy to make for a discernable, regularly periodic pattern of timing; one which may allow speakers to signal crucial next moments in their speech, and listeners to predict crucial next moments in the speech they are attending to.

One kind of crucial next moment is one in which new information is to be conveyed, (see the text examples in Bennet, Erickson, and

Gumperz, 1976, another is one at which the current speaker relinquishes a turn at speaking to another speaker. These strategically important next moments in conversation can be signalled by maintaining a regular cadence in speech rhythm. In question-answer sequences of the sort we have been considering in the text from the screening test, both turn exchange and new information occur at the same moments in time. It is thus reasonable to expect that questions and answers will be rhythmically enacted by the partners in conversations, and that the timing of answer slots in relation to the just-previous question slot will be of crucial consequence, both for the social and the cognitive organization of an interrogation sequence. The presence of an underlying cadence may enable the answerer to anticipate the next moment in which the answer needs to be said and enable the questioner to anticipate the next moment in which the answer will need to be heard.

In a study of fifty six school counseling interviews conducted by speakers of American English (see Erickson, 1975; Erickson & Shultz, 1977) we found that routine question-answer sequences were performed in a very rhythmically regular fashion. That same kind of sing-song cadence between question and answer also occurs in the kindergarten classroom in lessons with the teacher, and in the example of the screening test we have been considering.

To highlight the rhythmic organization of question-answer alternation in the test, turns (19-26) in the previous text example can be rewritten slightly. In the following rewrite, the initial syllable of each line occurs in a regular rhythmic cadence. Also on that cadence occur the full sentence-terminal pauses between one speaker's turn and that of the next speaker.

The reader should read the text aloud and practice the cadence first before reading the full text. Reading the text aloud in order to "hear" and feel the rhythmic organization of it is necessary if the subsequent discussion is to make sense to the reader.

Practice by reading aloud in succession only the initial syllables of the lines (including the regular spaces for sentence terminal pauses),

keeping a metronomic "beat" going as one reads" day-, light-, what-, night-, pause-, dark-, o.-, pause-, now-, pause-, bro-, boy-, what-, sis-,. Reading this string of syllables aloud while looking at the full text one notices that the words placed by themselves at the right-most end of a line (in the, at, if) occur in relation to the emphasized syllables as anticipatory syllables, similar to "upbeat" notes in music (in the DAY, at NIGHT, if BROther). With this in mind one can read the text aloud, maintaining the cadence of stressed syllables (and "stressed" pauses), and placing the anticipatory syllables in correct rhythmic relationship to the stressed syllables:

1-a		in the
1-b	'day time it is	
1-c	light	
1-d	what is it	at
1-e	night time	
1-f	//	
2-a	dark	
2-b	//	
3-a	O.K.	
3-b	//	
3-c	now	
3-d	//	a-
3-e	nother one	
3-f	//	if
3-g	'brother	is a
3-h	boy /	
3-i	what is	
3-j	'sister	

It is apparent that the turn-exchange points between the question and its answer are rhythmically regular. There is a right time for the answer slot, and a right time for the initiation of the next question. Line 1-c contains the last stressed syllable of the question. Line 1-f indicates one sentence-terminal pause duration, which marks the next cadence interval, or "beat". The new information of the answer to the question is contained in turn 2-a. It is said on the next "beat" after the previous pause. Then the next question begins in turn 3, but the new information of the question begins in line 3-g. It is prepared for by new information--a rhythmically regular series of framing moves consisting of alternating pauses and clause fragments in lines 3-b through 3-f. The answer ("dark") comes in the right time and its new information is regarded (apparently "heard") as the answer to the previous question. The next question is then prepared so that its new information can be "heard" by the person to whom the question is addressed.

In the preceeding rewrite, the answer (and the questions) comes at the right time. That is not the case in the actual test (see transcript presented earlier). There in turns 19-26 neither the answers nor the questions are said in their interactionally "right" rhythmic times. Moreover the first answer (turn 20) is given by the wrong person, Rita, who is not the designated answerer, since the test is being given to Angie. Rita's interjection is most interesting analytically because it seems to have thrown the tester's and Angie's mutual timing off, with the result that as Angie says the referentially "right" answer twice in the wrong times, the tester apparently doesn't hear what Angie is saying as <u>answers</u>. Rita's interjection comes itself slightly ahead of the full sentence-terminal pause which typically separates the last words of a question from the first words of its answer, and that slightly ahead-of-time placement of the answer may have contributed to throwing off the tester's timing. In turn (20) the tester cooperates in the rhythmic disorganization by interrupting

Rita's slightly arhythmic interruption (i.e. the tester starts to speak slightly ahead of the "right" time). Then just as the tester has "collided" with Rita by overlapping Rita's speech, Angie adds to the conversational traffic jam by overlapping what the teacher was saying to Rita (O::H). What Angie says in that wrong time to be answering, is the informationally correct answer to the question ("dark"). This answer is apparently not "heard" by the tester, who continues with the reprimand to Rita ("you can't sit here if you TELL her."), and then asks the question again to Angie, "What is nighttime?" Angie answers the question correctly in turn (21), but again does so in the wrong time. In turn (20) she answers too late--slightly more than two sentence-terminal pause lengths too late--in the temporally correct place for the tester to speak again and initiate a prompt, which is exactly what the tester does. The initial syllable of the tester's speech in turn (22) overlaps exactly with Angie's production of the one syllable answer, "dark", and again the tester apparently does not "hear" Angie's speech as an answer to the question. The apparent misinterpretation is compounded at this point in that as Angie has said "dark" (turn 21) a second time, the tester's continuation of a second prompt for an answer (which occurs in turn 24--the first prompt was at the end of turn 22), is apparently misinterpreted by Angie as a cue that Angie's previous answers have been incorrect. The tester's prompt seems a cue for something-something important. That is suggested by the exaggerated intonationally and rhythmically sing-song, "If daytime is light, nighttime is ..." The pause after "is", in combination with the preceding exaggerated cadence seems to be a cue for an answer slot. Since Angie has answered twice already, she seems to interpret the prompt as having a more specific meaning--not just the directive "answer now", but that plus the message "change your answer." I infer this because Angie does in fact change her answer. After the prompt in turn (22), Angie responds with the referentially "wrong" answer, "light". Angie places this wrong answer in the exactly correct rhythmic

slot. Having given the referentially right answer twice previously in the interactionally wrong times, now, in turn (23), Angie has given the wrong answer in the right time. In turn (24) the tester responds with another prompt (in perfect rhythmic cadence with Angie's previous answer). Seemingly this prompt in turn (24) is intended by the tester to function as a cue of the sort Angie may have thought the previous prompt in turn (22) was intended--as a cue that Angie's answer was referentially wrong. From what the tester says in turn (24) I infer that the tester "heard" Angie's answer in turn (23) as an answer, whereas I have been inferring that the tester did not "hear" Angie's previous two answers as if they were indeed answers. Notice that the tester's prompt in turn (24) begins exactly one sentence-terminal pause length after Angie's answer to the previous prompt. At this point Angie apparently does not interpret the tester's prompt as a cue that Angie's previous answer has been wrong, for in turn (25) she repeats her wrong answer again. Notice that Angie says this answer after a sentence-terminal pause, in exactly the "right" rhythmic place an answer should go. This is now Angie's fourth answer to the tester's initial test question in turn (19).

By turn (25) Angie and the tester have re-established the interactionally correct question-answer cadence, and Angie has given a second "wrong" answer in the right time. It is this last answer that is finally marked down by the tester as Angie's official answer. The answer has become a piece of test data; a social fact.

In the light of the preceding interpretive analysis the social fact can be seen to have been interactionally produced, through a process of conversational inferences about referential and social meaning of utterances; inferences by the tester and Angie which are apparently at cross purposes; inferences which seem to depend on the cadential timing of questions and answers as an important source of cues pointing toward the referential and social meanings intended by the speakers. Because this pointing toward meaning is so implicit, depending for communicative success on shared background understandings between the

speakers, it is easy for misinterpretations to arise, and difficult for the interactional mistakes that result to be repaired.

My hunch is that interactional troubles continually arise in the administration of assessment tests to young children, and in the conduct of referential communication experiments. What is being tapped when children give wrong answers may not so much be their underlying referential cognitive knowledge and abilities, as it may be their underlying knowledge and abilities in the domain of social and interactional inference.

How to distinguish between these two domains and how to devise ways of studying each without confounding either with the other, seems to be an important problem for future research and theory construction. Both referential cognition and what I have been calling interactional inference are kinds of thinking. In what ways are they the same, and in what ways different? How are they involved in children's and adult's interactional production and interpretation of communication in assessment tests and in classroom lessons? These are questions which deserve some new kinds of answers.

Larger scale matters of timing in the test. In considering patterns of timing within utterances and across connected sets of conversational turns, such as sequences of question-answer pairs, we have been dealing with time in both senses discussed earlier; kairos and chronos. At the micro level of social organization of communicative behavior in discourse, these two aspects of time intersect. The rhythmic cadences in speech which seem to enable conversational partners to predict crucial next moments communication involve the kairos dimension of timing, times of appropriateness for action. Chronos is also involved, for the cadences of speech and nonverbal communication rhythms we have been discussing are measurable in terms of clock time.

The discussion turns now mainly to aspects of kairos considered by itself; to some of the functions of kairos in the social organization of the test as an interactional event. Here we are not considering

technically measurable time, but chunks of time which are both longer and more loosely defined in terms of their duration. Within the test there is an overall sequence of constituent parts; each part being a set of questions taken from a standardized test. At the beginning of the test there is a beginning time, which separates the test as an event from the time which has preceded it. At the end of the test there is an ending time, which separates the test as an event from the time which follows it. Yet because this is everyday life, not artificially organized life, the beginning and ending of the event, and the transitions from one constituent part to the next within it, are not signalled unambiguously, as in the ringing of a bell to signal the end of a round in a boxing match. That would be organization of beginnings and endings according to chronos. Rather, the organization at this level of the testing event is according to kairos. Both the tester and testee need to recognize these times as they happen. One of the recurring problems the tester has with both Angie and Rita seems to involve their understanding of the kairos aspects of test time. During the time continuation of the test, for example, it is not appropriate for Angie to ask such questions as (turn 35), "Can I get me some water now?" The now of continuation is no time in which to be asking to do something which would end the event.

The recurring occurrance of the interactional slot, Angie's answering time, is another kind of time around which there seems to be recurring confusion during the test. Rita barges into that time right after Angie has answered and the tester is about to go on and ask the next question (turn 30). Then the listing of 'things to drink" begins, which ends in Angie's asking "Can I get me some water now?" (turn 35). As we saw earlier, Rita also seems confused about Angie's answering time in turns (19-26), in which Rita jumps in and answers the question about light and darkness that was addressed by the tester to Angie. In the previous discussion of these turns it was noted that at the micro level of timing measurable by a metronome, Rita's inappropriate answer begins one half of a full pause length too soon. This is an

instance in which chronos and kairos intersect at the micro level of the timing of exchange of turns at speaking. But even if Rita's answer had been given in the correct place in terms of the rhythmic cadence of discourse, this was still Angie's answering time, not Rita's. Rita was wrong then in terms of kairos as well as wrong in terms of chronos.

We can see in turns (19-26), at turn (35) and at turns (15-16)--points in the kairos organization at which the tester is about to begin another question to Angie, or a whole new sequence of questions--Rita and Angie have recurring trouble with what we earlier called membership boundary definition. Is it time for the children to go off and play, or for Angie to keep on taking the test? Is it time for Rita to be "in" the conversation, or "out?" This kind of role confusion was also seen at the very beginning of the conversation (turns 6-13) in which Angie and Rita get so involved in their discussion of plans for playing house after the test that the tester has considerable trouble opening up the time of the official beginning of the test.

Just as there was ambiguity at the beginning of the test about the time of its opening, so there is ambiguity at the end of the test about the time of its closing. At turn (43) the tester introduces a set of test items to check Angie's gross motor skills. The tester begins this test sequence by asking Angie to skip over to the section of the room in which girls are building a house out of "big blocks". There are a number of items in this motor skills question series, but the tester is able to administer only the first item in the series. After having "skipped over there" for the tester Angie does not return back "here" to where the tester is sitting. Angie says (turn 45) that she wants to go play with the boys listening with headphones to the "scary" record. The tester (turn 46) says indirectly that this is inappropriate, using the conditional construction, "You'd have to ask the boys / I don't know if they'd let you." Angie apparently takes this literally rather than figuratively as a directive. (There is some sense in doing so, since the boys have headphones on, and because of that it is counterfactual to propose asking them anything.) Angie

then asks the girls playing with the big blocks, "Can I go in there?" (They do not have headphones on.) The girls assent, and Angie walks off to join them. The tester apparently decides not to call Angie back (as evidenced by shrugged shoulders) and so the test has ended. The ending, like so many of the internal transitions, was interactionally produced. The conjoint production of the ending involved apparent misunderstanding by Angie of the tester's interactional intentions in terms of what and whose time it is.

A final example of Angie's apparent confusion as to kairos time in the test is found in turns (39-42). This segment begins just after Angie's inappropriate request to get a glass of water (turns 29-35). The tester has been asking obvious questions, e.g. turn (28), "What do you do when you're thirsty?" Notice that after turn (28) Angie pauses and shrugs and then answers, "Get a glass of water" in a "that's obvious" intonation. After the next question in turn (36), "What do you need stoves for, Angie?" Angie again pauses, shrugs and says, in a "that's obvious" intonation, "Cook." (turn 37). The tester may be acknowledging the intonation by saying in turn (38), "To cook, of course."

At this point Angie exchanges roles with the tester. The little girl becomes the questioner and the adult becomes the answerer. Angie points and asks, "What's that door?" (turn 39). The tester answers, "Closet, the closet door." Angie then asks, "What's inside it?", and the tester replies with intonational emphasis, "Well, maybe you can look AFTER YOU FINISH HERE." Then the tester asks the first of a new series of test questions, thus reassuming the role of questioner.

On the face of it, Angie's question seems bizarre. At a literal, referential level of meaning there seems to be no logical connection between stoves used for cooking (turns 36-38) and closet doors (turn 39). Moreover, in the kairos sense, this is not time for Angie to be asking questions; this is the time in which the tester asks the questions and Angie provides the answers. Still, the bizarre makes more sense than what is apparent at first glance. It is a metaphorical rather than

literal sort of sense-making. Notice that Angie's question in turn (39) has a "test-like" quality; asking about something the answer to which is obvious, as were the answers to the previous questions about thirst and stoves. Also, what is actually behind the closet door is the play stove used by the children in class for playing house. The tester has just asked about something to drink (water) and about stoves and cooking. In that context, Angie's question can be interpreted as a way of playing at being the tester, and of doing so by asking her own questions about a topically relevant piece of information--where the play stove is kept, since we've just been talking about actual stoves.

Angie's question about the cupboard door can thus be interpreted as showing she is making sense, on the basis of background understandings about the classroom which are not shared by the tester who is a teacher, but not the classroom teacher in this classroom. In asking that question Angie also reveals once again some of the ways in which she does not share with the tester some fundamentally necessary, taken for granted and never articulated understandings of the ways in which conversation in tests is to be conducted. Apparently Angie does not know what and whose time it is. Apparently she does not know that control over her behavior in that time belongs to the tester, not to Angie. It is not Angie's communicative right to initiate a new conversational topic; that right belongs to the tester alone during test time.

Conclusions. I asserted at the beginning that, from a sociolinguistic perspective, in considering naturally occurring speech it seems impossible to think of referential aspects of meaning as separable from social aspects of meaning. In presenting the example of the screening test I attempted to show, through interpretive discussion of a transcript of speech, paralinguistic cues, and some nonverbal communicative actions, how people engaged in interaction seem to be "doing" social meaning as they "do" referential meaning, and how they seem to be assuming that others engaged in interaction with them are employing strategies for inferring social meaning (or interpersonal intentions

of the moment, (cf. Goody, 1978, pp. 10-16). When one person's inferences don't match those of the others, moments of interactional "stumbling" happen in which people misinterpret not only one another's implicitly communicated interactional intentions, but also misinterpret the explicit literal meanings of talk as well.

In one such "stumble", the tester and Angie together produced two "wrong" answers to a test question which Angie had twice previously answered referentially correctly. Other stumbles involved trouble over Rita's participation and Angie's. Rita repeatedly seems to have misread the tester's implicit, nonliterally expressed directives for Rita to be quiet. (Alternatively, Rita may have deliberately taken the tester's speech literally, as a way of playing dumb about the implicit imperative force of the tester's remarks. According to either interpretation Rita's actions are situationally inappropriate, as evidenced by the tester's reactions to what Rita is doing). Angie not only ends up answering a test question wrong, but at one point takes over the role of question asker, and seems unaware at the end of the test of the social meaning of the tester's talk as the tester attempts implicitly to tell Angie that the official test is not over yet. A result is that Angie's overall score on the test is different from what it would have been had she known how to interpret more appropriately the social meaning as well as the referential meaning of the tester's talk.

The example of the test contains only a few instances of apparent miscueing in social as well as referential meaning. What happens there has also been found in other school testing situations (cf. Cicourel, et al., 1974, Mehan, 1978), in classroom lessons (McDermott, 1976) and in academic counseling interviews (Erickson, 1975, Erickson, 1979, and Erickson & Shultz, in press). So while the example presented here is only one instance, the processes of conversational inference which are employed by the speakers are processes which seem to be used continually in the conduct of everyday discourse. (For an extended discussion see Gumperz 1977, and Gumperz, 1979. For discussion of these

issues in relation to classroom discourse and other kinds of talk in educational settings, see Gumperz, in press).

A key aspect of these processes of conversational inference and interpersonal coordination seems to be the timing of interaction itself. Temporal organization was considered at two levels; that of the primary constituent "chunks" of discourse within an event and that of the moment to moment timing of speech and nonverbal behavior. As interactional partners go from one major segment of interaction to the next, role relationships are rearranged; who can appropriately say what to whom changes across these segments. Shultz and I, following Philips (1972) have called these patterns of communicative rights and obligations participation structures (Erickson and Shultz, 1977).

I have discussed some of the behavioral means, vocal and nonvocal, by which communication is socially and rhythmically organized, by which interactional partners are able to coordinate their activity in reciprocal and complementary ways, and by which they are able to communicate social as well as referential meaning simultaneously. I have presented a theoretical perspective on communication as socially organized action in real time. This set of perspectives, which can be called those of "interactional sociolinguistics" makes assumptions about the processes of interactional inference which enable interpersonal coordination and which enable people to "read" the referential and social meanings which are being communicated in and through face-to-face interaction. It is assumed that people's interpretive ability to do interactional inference is culturally learned, just as is their capacity to interpret the literal meaning of sentences on the basis of learned knowledge of the sound system and grammar of language.

The emerging approach of interactional sociolinguistics overlaps somewhat with the study of children's referential communication, and with psycholinguistic approaches to the study of children's language acquisition. Interactional sociolinguistics is also discontinuous, in aspects of substance and of method, with these other fields. Substantively, there is an emphasis on social meaning almost to the

exclusion of considering referential meaning at all. Methodologically, there is an emphasis on using audio and audiovisual documents of instances of naturally occurring interaction as a data base, and on interpretive, microethnographic or "constitutive" analysis of the documentary records. These are means of locating the particular organizing features of social action in discourse which are usually not attended to in experimental studies--the interactional processes by which test results and experimental results are produced.

I am not a psychologist and am not used to thinking about thinking. I can only guess at what is involved in children's acquisition of a capacity for socioculturally appropriate interactional inference. Some kinds of underlying cognitive processing must be postulated, it seems to me, in order to account for what we see people doing as they communicate social and referential meaning face-to-face. The interpretive processes one needs to assume would seem to be of quite rough and ready sort, if people were able to derive meaning, social and referential, out of the messiness of naturally occurring conversation. People seem to be able to do so consistently enough to make everyday communication possible.

If what I have been considering here are some fundamental aspects of what children need to know and be able to do in order to participate in everyday conversation, then somehow this work makes contact with, and needs to be better articulated with, work on referential aspects of children's speech. Such articulation is necessary to advance our understanding of children's oral communication skills; to develop theory which is more clear and more comprehensive than that which presently exists.

REFERENCES

Asher, S. R. Children's ability to appraise their own and another person's communication performance. Developmental Psychology, 1976, 12: 24-32.

Asher, S. R. & Wigfield, A. Training referential communication skills. University of Wisconsin, 1978. Paper prepared for the conference on Children's Oral Communication Skills, Wisconsin Research and Development Center for Individualized Schooling.

Austin, J. L. How to do things with words. Cambridge: Harvard University Press, 1962.

Bennet, A., Erickson, F., & Gumperz, J. J. Coordination of verbal and nonverbal cues in conversation. Ms. (report on Workshop held at the University of California, January, 1976).

Bourdieu, P. Outline of a theory of practice. Cambridge: Harvard University Press, 1977.

Brazelton, B. T., Doslowski, B., & Main, M. The origins of reciprocity: The early mother-infant interaction. In Lewis, M., & Rosenbloom, L. (eds.) The Effect of the Infant on its Caretaker. New York: John Wiley and Sons, 1974.

Bronfenbrenner, U. Reality and research in ecology of human development. Proceedings of the American Philosophical Society. 1975, 119(6): 439-469.

Burke, K. A grammar of motives. Berkeley and Los Angeles: University of California Press, 1969.

Byers, P. From biological rhythm to cultural pattern: A study of minimal units. Doctoral dissertation, Columbia University. University Microfilms No. 73-9004, Ann Arbor, Michigan, 1972.

Byers, P. & Byers, H. Nonverbal communication and the education of children. In Cazden, C., Hymes, D., & John, V. (eds.) Functions of Language in the Classroom. New York: Teachers College Press, 1972.

Chapple, E. D. Culture and biological man: Explorations in behavioral anthropology. New York: Holt, Rinehart and Winston. 1970.

Cicourel, A. V. Basic and normative rules in the negotiation of status and role. In Sudnow, D. (ed.) Studies in Social Interaction. New York: The Free Press, 1972.

Cicourel, A. V. Language use and skill performance. Academic Press, 1974.

Cole, M., Gay, J., Glick, J. A., & Sharp, D. The cultural context of learning and thinking: An exploration in experimental anthropology. New York: Basic Books, 1971.

Cole, M., Hood, L. & McDermott, R. P. Ecological niche picking: Ecological invalidity as an axiom of experimental cognitive psychology. Institute for Comparative Human Development, The Rockefeller University, 1978.

Condon, W. & Ogston, W. D. A segmentation of behavior. Journal of Psychiatric Research, 1967, 5: 221-235.

Cook-Gumperz, J. Situated instructions: Language socialization of school-age children. In Ervin-Tripp, S. & Mitchell-Kernan, C. (eds.) Child Discourse. Academic Press, Inc. New York, 1977.

Cook-Gumperz, J., & Corsaro, W. A. Social-ecological constraints on children's communicative strategies, in Papers on language and context. J. Cook-Gumperz & J. Gumperz, (eds.), University of California, Berkeley, 1976.

Erickson, F. Gatekeeping and the melting pot: Interaction in counseling encounters. Harvard Educational Review, 1975, 45: 44-70.

Erickson, F. Gatekeeping encounters: A social selection process. In Sanday, P. R. (ed.) Anthropology and the Public Interest. New York: Academic Press, 1976.

Erickson, F., & Shultz, J. When is a context?: Some issues and methods in the analysis of social competence. The Quarterly Newsletter of the Institute for Comparative Human Development, the Rockefeller University, 1:2 (Feb.); 5-10, 1977. Also forthcoming in Green, J., & Wallat, C. (eds.) Ethnographic approaches to face to face interaction in educational settings. Norwood, N. J.: Ablex, in press.

Flavell, J. H., et al. The development of role taking and communicative skills in children. New York: John Wiley and Sons, 1968.

Garfinkel, H., & Sacks, H. On formal structures of practical actions. In McKinney, J. C., & Tiryakin, E. A., (eds.) Theoretical Sociology: Perspectives and Developments. New York: Appleton-Century-Crofts, 1970.

Goffman, E. Encounters: Two studies in the sociology of interactions. Indianapolis: Babbs-Merrill, 1961.

Goffman, E. Frame analysis: An essay on the organization of experience. Harper Colophon Books, 1974.

Goody, E. N. Questions and politeness: Strategies in social interaction. Cambridge: Cambridge University Press, 1978.

Griffin, P. & Shuy, R. Children's functional language and education in the early years. Final technical report to the Carnegie Corporation of America. Arlington, VA.: Center for Applied Linguistics, 1978.

Gumperz, J. J., & Herasimchuk, E. The conversational analysis of social meaning: A study of classroom interaction. In Shuy, R., (ed.) Sociolinguistics: Current Trends and Prospects. Washington, D.C.: Georgetown University Press, 1972.

Gumperz J., Sociocultural knowledge in conversational inference. In Saville-Troike, M., (ed.) Linguistics and Anthropology. Georgetown University Roundtable on Language and Linguistics, 1977: 191-211.

Gumperz J. (in press) Conversational inference and classroom learning. in Green, J. & Wallat, C., (eds.) Ethnographic approaches to face to face interaction in educational settings. Norwood, N. J.: Ablex.

Gumperz, John. The retrieval of sociocultural knowledge in conversation. Occasional paper, Language-Behavior Research Laboratory, University of California at Berkeley, 1979.

Hall, E. T. The Silent Language. New York: Fawcett, 1959.

Hymes, D. Introduction: Toward ethnographies of communication. In The Ethnography of Communication, Gumperz, J., & Hymes, D., (eds.) American Anthropologist, 1964, 55:5 Pt. II:1-34.

Hymes, D. Foundations of sociolinguistics: An ethnographic approach. Philadelphia: University of Pennsylvania Press, 1974.

Kendon, A. Introduction. In Kendon, A., Yarris, R. M., & Key, M. R., (eds.) Organization of behavior in face-to-face interaction. The Hague/Chicago: Mouton/Aldine, 1975.

McDermott, R. P. Kids make sense: An ethnographic account of the interactional management of success and failure in one first grade classroom. Stanford: unpublished dissertation, Stanford University, 1976.

McDermott, R. P., & Gospodinoff, K. Social contexts for ethnic borders and school failure. In Wolfgang, A. (ed.) Nonverbal behavior. New York: Academic Press, 1979.

Mehan, H. Structuring school structure. Harvard Educational Review, 1978, 48: 1:32-64.

Mehan, H. Learning lessons: Social organization in the classroom. Cambridge: Harvard University Press, 1979.

Mehan, H., & Wood, H. The reality of ethnomethodology. New York: John Wiley and Sons, 1975.

Merleau-Ponty, M. The structure of behavior. (trans. Alden L. Fisher) London: Methuen, 1965.

Olson, D. V., & Hildyard, A. 1978. Assent and Compliance in Children's Language Comprehension: Knowing and doing. Paper prepared for the Conference on Children's Oral Communication Skills, Wisconsin Research and Development Center for Individualized Schooling, Madison, Wisconsin, 1978.

Phillips, S. Participant structures and communicative competence: Warm Springs children in community and classroom. In Cazden, D., Hymes, D., & John, V., (eds.) Functions of language in the classroom. New York: Teachers College Press, 1972.

Rosenthal, R., Hall, J. A., Archer, D., DiMatteo, M. R., & Rogers, P. L. The PONS test: Measuring sensitivity to nonverbal cues. In S. Weitz, Nonverbal communication (Rev. ed.). New York: Oxford University Press, 1979.

Searle, J. Speech acts. Cambridge: Cambridge University Press, 1969.

Shulman, L. S. Relating theory to practice. Occasional Paper #12, Institute for Research on Teaching, East Lansing, Michigan: Michigan State University, 1978.

Sinclair, J. M., & Coulthard, R. M. Toward an analysis of discourse: The english used by teachers and pupils. Oxford: Oxford University Press, 1975.

Sudnow, D. Ways of the hand: The organization of improvised conduct. Cambridge, Massachusetts, Harvard University Press. 1978.

Trim, J. A system for the notation of english intonation. Unpublished manuscript, Cambridge University, 1975.

ADDENDUM: ADDITIONAL REFERENCES*

Cicourel, Aaron V., et. al. Language Use and School Performance. New York: Academic Press, 1974.

Erickson, Frederick. "Talking down: some cultural sources of miscommunication in interracial interviews," in A. Wolfgang (ed.),Nonverbal Communication. New York: Academic Press, 1979.

Erickson, Frederick and Jeffrey J. Shultz. Talking to the Man: Social and Cultural Organization of Interaction in School Counseling Interviews. New York: Academic Press, in press.

Markman, Ellen. "Comprehension monitoring." Paper delivered at Conferemce on Children's Oral Communication Skills, Wisconsin R&D Center for Individualized Schooling; Madison, Wisconsin, October 18-20, 1978.

Robinson, E.J. "The child's understanding of inadequate messages: a problem of ignorance or egocentricism?" Paper delivered at Conference on Children's Oral Communication Skills, Wisconsin R&D Center for Individualized Schooling, Madison, Wisconsin, October 18-20, 1978.

Sacks, Harvey, Emanuel Schegloff, and Gail Jefferson. "A simplest systematics for the organization of turn-taking for conversation." Language Fifty (1974): pages 696-735.

Shuy, Roger and Peg Griffin (eds.). The study of children's functional language and education in the early years. Final report to the Carneigie Corporation of New York. Arlington, Virginia: Center for Applied Lingusitics, 1978.

*These references have been added because of minor additions to this paper subsequent to submission to the Working Papers Series.